

IV. AMENDMENTS TO THE CLAIMS

1. (CANCELED).
2. (PREVIOUSLY PRESENTED) The advanced water treatment process according to claim 32, wherein the minute bubbles of ozone have an average particle diameter of 0.5 to 3 μm .
3. (PREVIOUSLY PRESENTED) The advanced water treatment process according to claim 33, wherein the minute bubbles of ozone have an average particle diameter of 10 to 20 μm .
4. (PREVIOUSLY PRESENTED) The advanced water treatment process according to claim 33, wherein the minute bubbles of ozone have an average particle diameter of 50 to 60 μm .
5. (PREVIOUSLY PRESENTED) The advanced water treatment process according to claim 32, wherein the minute bubbles of ozone have an average particle diameter of 20 to 80 μm .
6. (CANCELED).
7. (CANCELED).
8. (CURRENTLY AMENDED) The advanced water treatment process according to claim 32, wherein the at least one ozone treatment tank includes a plurality of ozone treatment tanks are arranged at respective successive stages, such that waste ozone in a latter-stage one of the ozone treatment tanks is circulated to a former-stage one of the ozone treatment tanks.
- 9 (PREVIOUSLY PRESENTED) The advanced water treatment process according to claim 32, wherein prior to an ozone treatment, or posterior to the ozone treatment, a hydrogen peroxide treatment using a hydrogen peroxide solution is carried out for the water to be treated.
10. (PREVIOUSLY PRESENTED) An advanced water treatment process for bringing minute bubbles of ozone into contact with water to be treated,

which contains harmful substances including dioxins and PCB, thereby carrying out oxidative destruction of the harmful substances, wherein prior to an ozone treatment, or posterior to the ozone treatment, a treatment by using a hydrogen peroxide solution is carried out for the water to be treated and a foul-odor air generated from the water within a treatment system is formed into minute bubbles such that the minute bubbles of the foul-odor air are mixed into the hydrogen peroxide solution so that the foul-odor air undergoes oxidative destruction.

11. (ORIGINAL) The advanced water treatment process according to claim 10, wherein the minute bubbles of the foul-odor air have an average particle diameter of 0.01 to 0.02 mm.

12 (PREVIOUSLY PRESENTED) The advanced water treatment process according to claim 9, wherein prior to the treatment by using the hydrogen peroxide solution, the water to be treated is adjusted to a pH of 8 to 10.

13. (PREVIOUSLY PRESENTED) The advanced water treatment process for bringing minute bubbles of ozone into contact with water to be treated, which contains harmful substances including dioxins and PCB, thereby carrying out oxidative destruction of the harmful substances, wherein at least one of gold, copper oxide, and iron oxide is thrown into the water which is to be subjected to the treatment by using the hydrogen peroxide solution, thereby promoting an oxidation treatment by the hydrogen peroxide solution.

14. (PREVIOUSLY PRESENTED) An advanced water treatment process for bringing minute bubbles of ozone into contact with water to be treated, which contains harmful substances including dioxins and PCB, thereby carrying out oxidative destruction of the harmful substances, wherein prior to the ozone treatment, an electrolysis treatment is carried out for the water to be treated.

15. (PREVIOUSLY PRESENTED) The advanced water treatment process according to claim 32, wherein an ultraviolet radiation treatment is carried out for the water to be treated after the ozone treatment, the water containing residual ozone which did not act in the oxidative destruction of the harmful substances.

16. (PREVIOUSLY PRESENTED) An advanced water treatment process according for bringing minute bubbles of ozone into contact with water to be treated, which contains harmful substances including dioxins and PCB, thereby carrying out oxidative destruction of the harmful substances, wherein an ultraviolet radiation treatment is carried out for the water to be treated after the ozone treatment, the water containing residual ozone which did not act in the oxidative destruction of the harmful substances and after the ultraviolet radiation treatment, an electrolysis treatment and a carbonized filter medium contact treatment are carried out for the water to be treated.

17. (PREVIOUSLY PRESENTED) An advanced water treatment process for bringing minute bubbles of ozone into contact with water to be treated, which contains harmful substances including dioxins and PCB, thereby carrying out oxidative destruction of the harmful substances and irradiating ultraviolet light, wherein irradiating ultraviolet light includes an ultraviolet radiation treatment tank is arranged within a treatment system, the ultraviolet radiation treatment tank having an ultraviolet light source arranged therein and inner walls thereof coated with titanium dioxide, ultraviolet ray is irradiated onto the inner walls to thereby cause a photocatalytic treatment for deodorizing a foul-odor within the ultraviolet radiation treatment tank.

18. (CANCELED).

19. (CANCELED).

20. (PREVIOUSLY PRESENTED) The advanced water treatment system according to claim 34, wherein the ozone supply means forms ozone into minute bubbles having an average particle diameter of 0.5 to 3 μm .

21. (PREVIOUSLY PRESENTED) The advanced water treatment system according to claim 35, wherein the ozone supply means forms ozone into minute bubbles having an average particle diameter of 10 to 20 μm .

22. (PREVIOUSLY PRESENTED) The advanced water treatment system according to claim 35, wherein the ozone supply means forms ozone into minute bubbles having an average particle diameter of 50 to 60 μm .

23. (PREVIOUSLY PRESENTED) The advanced water treatment system according to claim 34, wherein the ozone supply means forms ozone into minute bubbles having an average particle diameter of 20 to 80 μm .

24. (PREVIOUSLY PRESENTED) The advanced water treatment system according to claim 34, ~~including the~~ wherein the at least one ozone treatment tank includes a plurality of ozone treatment tanks arranged at respective successive stages, such that extra ozone coming up from the water to be treated in a latter-stage one of the ozone treatment tanks is circulated to a former-stage one of the ozone treatment tanks.

25 (PREVIOUSLY PRESENTED) The advanced water treatment system according to claim 34, including a hydrogen peroxide solution treatment tank at a water inlet side or a water outlet side of the ozone treatment tank.

26. (PREVIOUSLY PRESENTED) An advanced water treatment system for purifying water to be treated, which contains harmful substances including dioxins and PCB,

the advanced water treatment system comprising an ozone treatment tank for bringing minute bubbles of ozone into contact with the water to be treated, thereby carrying out oxidative destruction of the harmful substances ,including a hydrogen peroxide solution treatment tank at a water inlet side or a water outlet side of the ozone treatment tank and including foul-odor supply means for forming a foul-odor air generated from the water within the treatment system into minute bubbles such that the minute bubbles of the foul-odor air are mixed into the hydrogen peroxide solution.

27. (ORIGINAL) The advanced water treatment system according to claim 26, wherein the foul-odor supply means causes the minute bubbles of the foul-odor air to have an average particle diameter of 0.01 to 0.02 mm.

28. (PREVIOUSLY PRESENTED) The advanced water treatment system according to claim 34, including an ultraviolet radiation treatment tank at an outlet side of the ozone treatment tank, the ultraviolet radiation treatment tank having an ultraviolet light source arranged therein and inner walls thereof coated with titanium dioxide.

29. (PREVIOUSLY PRESENTED) An advanced water treatment system for purifying water to be treated, which contains harmful substances including dioxins and PCB,

the advanced water treatment system comprising an ozone treatment tank for bringing minute bubbles of ozone into contact with the water to be treated, thereby carrying out oxidative destruction of the harmful substances including an ultraviolet radiation treatment tank at an outlet side of the ozone treatment tank, the ultraviolet radiation treatment tank having an ultraviolet light source arranged therein and inner walls thereof coated with titanium dioxide, wherein the ultraviolet radiation treatment tank has a plurality of partition walls coated with titanium dioxide, the partition walls being arranged such that a distance between adjacent ones thereof is within 30 cm.

30. (ORIGINAL) The advanced water treatment system according to claim 29, wherein the ultraviolet radiation treatment tank has a body in the form of a bottomed hollow cylinder extending vertically, an ultraviolet lamp being arranged in a diametrical center of the body, with the plurality of partition walls having plate surfaces radially extending toward the ultraviolet lamp positioned in the center of the arrangement of partition walls.

31. (ORIGINAL) The advanced water treatment system according to claim 30, including a carbonized filter medium treatment tank arranged at a water outlet side of the ultraviolet radiation treatment tank, the carbonized filter medium treatment tank having a conifer carbonized filter material obtained by carbonizing raw materials of plural kinds of conifer, including cedar, pine, and Japanese cypress (hinoki) at a high temperature range of 800 to 900°C.

32. (CURRENTLY AMENDED) An advanced water treatment process for bringing minute bubbles of ozone into contact with water to be treated which contains harmful substances including dioxins and PCB to carry out oxidative destruction of the harmful substances contained in the water to be treated, the advanced water treatment process comprising:

mixing together ozone generated from an ozone generator and the water to be treated to obtain water to be treated which contains ozone;

passing the water to be treated which contains ozone through an ozone bubble-forming device arranged in a water pipe to obtain water to be treated which contains minute bubbles of ozone, bringing the minute bubbles of ozone into contact with the water to be treated; and

supplying to ~~an~~ at least one ozone treatment tank the water to be treated which contains the minute bubbles of ozone; and

carrying out oxidative destruction of the harmful substances in the water to be treated.

33. (PREVIOUSLY PRESENTED) An advanced water treatment process for bringing minute bubbles of ozone into contact with water to be treated which contains harmful substances including dioxins and PCB to carry out oxidative destruction of the harmful substances contained in the water to be treated, the advanced water treatment process comprising:

mixing together ozone generated from an ozone generator and the water to be treated to obtain water to be treated which contains ozone;

supplying the water to be treated which contains ozone to an ozone treatment tank, the ozone treatment tank having an ozone bubble-forming device provided on its bottom; and

subjecting the water to be treated which contains ozone to a forced convection state within the ozone treatment tank to obtain water to be treated which contains minute bubbles of ozone, bringing the minute bubbles of ozone into contact with the water to be treated.

34. (CURRENTLY AMENDED) An advanced water treatment system for purifying water to be treated which contains harmful substances including dioxins and PCB, the advanced water treatment system comprising:

ozone supplying means for introducing ozone generated by an ozone generator to a water pipe through which the water to be treated passes, supplying minute bubbles of ozone obtained with an ozone bubble-forming device provided in the water pipe; and

~~an~~ at least one ozone treatment tank in which oxidation of the harmful substances is effected by using the minute bubbles of ozone that are brought into contact with the water to be treated.

35. (PREVIOUSLY PRESENTED) An advanced water treatment system for purifying water to be treated which contains harmful substances including dioxins and PCB, the advanced water treatment system comprising:

a water pipe through which the water to be treated is introduced into an ozone treatment tank, the water to be treated containing ozone generated by an ozone generator; and

the ozone treatment tank having an ozone bubble-forming device provided on its bottom, in which the water to be treated which contains ozone is subjected to forced convection to generate minute bubbles of ozone, effecting oxidization of the harmful substances contained in the water to be treated.